

I/WE CLAIM:

1. A dishwasher comprising:

a tub having bottom, opposing side, rear and top walls which collectively define a washing chamber adapted to receive and cleanse soiled kitchenware;

at least one wash arm for spraying washing fluid onto kitchenware placed into the washing chamber;

a pumping unit, including a motor, for directing washing fluid to the at least one wash arm;

a filter chamber, adapted to receive a portion of the washing fluid, for entrapping soil from the washing fluid while permitting cleansed washing fluid to be directed back into the washing chamber;

a drain exposed to the filter chamber;

an overflow tube leading upwardly from the filter chamber such that washing fluid can rise within the overflow tube upon collection of soil in the filter chamber;

a sensor for signaling a presence of washing fluid in the overflow tube; and

a controller, linked to the sensor, for initiating a drain operation for the dishwasher.

2. The dishwasher according to claim 1, wherein the sensor comprises a flow sensor.

3. The dishwasher according to claim 2, wherein the flow sensor senses the presence of washing fluid in the overflow tube by completing an electrical circuit within the overflow tube.

4. The dishwasher according to claim 1, further comprising: a filter unit provided atop the overflow tube.
5. The dishwasher according to claim 4, wherein the filter unit includes a housing enclosing a filter.
6. The dishwasher according to claim 1, further comprising: means for sensing a current drawn by the motor of said pumping unit, wherein the controller terminates the drain operation based on a change in the sensed current.
7. The dishwasher according to claim 6, further comprising: a drain pump, separate from the pumping unit, connected to the drain, said drain pump being operated through the controller during the drain operation.
8. The dishwasher according to claim 6, further comprising: a water valve for introducing water into the tub, said controller functioning to open the water valve subsequent to initiation of the drain operation and close the water valve based on a change in the sensed current.
9. The dishwasher according to claim 1, further comprising: a turbidity sensor for determining a soil level in washing fluid within the tub, said controller being linked to the turbidity sensor for initiating a drain operation based on the soil level.

10. A dishwasher comprising:

a tub having bottom, opposing side, rear and top walls which collectively define a washing chamber adapted to receive and cleanse soiled kitchenware;

at least one wash arm for spraying washing fluid onto kitchenware placed into the washing chamber;

a pumping unit, including a motor, for directing washing fluid to the at least one wash arm;

a filter chamber, adapted to receive a portion of the washing fluid, for entrapping soil from the washing fluid while permitting cleansed washing fluid to be directed back into the washing chamber;

a drain exposed to the filter chamber;

means for sensing a plurality of dynamic operating parameters of the dishwasher, with the plurality of dynamic operating parameters including at least one fluid dynamic operating parameter and a current of the motor; and

means for performing both an unscheduled drain operation, based on the plurality of dynamic operating parameters, and at least one timed drain operation for the dishwasher during an overall dishwashing cycle.

11. The dishwasher according to claim 10, wherein the means for sensing includes a flow sensor for sensing the at least one fluid dynamic operating parameter.

12. The dishwasher according to claim 11, wherein the means for sensing further includes a turbidity sensor for determining a soil level in the washing fluid.

13. The dishwasher according to claim 11, further comprising: an overflow tube leading upwardly from the filter chamber such that washing fluid can rise within the overflow tube upon collection of soil in the filter chamber, wherein the flow sensor signals a presence of washing fluid in the overflow tube.

14. The dishwasher according to claim 13, further comprising: a filter unit provided atop the overflow tube.

15. The dishwasher according to claim 14, wherein the filter unit includes a housing enclosing a filter.

16. The dishwasher according to claim 10, further comprising:
a water valve for introducing water into the tub; and
means for opening the water valve subsequent to initiation of at least one of the unscheduled and timed drain operations and closing the water valve based on a change in the current of the motor.

17. The dishwasher according to claim 16, further comprising: a drain pump, separate from the pumping unit, connected to the drain, said drain pump being operated through the controller during the drain operation.

18. The dishwasher according to claim 10, wherein the means for sensing includes a turbidity sensor for determining a soil level in washing fluid within the tub.

19. A method of operating a dishwasher comprising:
drawing washing fluid from within a washing chamber defined in a tub of the dishwasher into a pump housing;
pumping at least a majority of the washing fluid to at least one wash arm for spraying onto kitchenware being washed in the dishwasher;
diverting a portion of the washing fluid into a filter chamber within which soil from the washing fluid is entrapped while cleansed washing fluid is directed back into the washing chamber;
causing washing fluid to rise within an overflow tube leading upwardly from the filter chamber upon collection of soil in the filter chamber;
signaling a presence of washing fluid in the overflow tube; and
initiating a drain operation for the dishwasher.
20. The method of claim 19, further comprising:
sensing current for a pump motor; and
terminating the drain operation based on the sensed current.
21. The method of claim 20, further comprising:
opening a water valve subsequent to initiation of the drain operation; and
closing the water valve based on a change in the sensed current.
22. The method of claim 19, further comprising:
determining a soil level in the washing fluid within the tub; and
initiating the drain operation based on the soil level.

23. A method of operating a dishwasher comprising:
- drawing washing fluid from within a washing chamber defined in a tub of the dishwasher into a pump housing;
 - pumping the washing fluid to at least one wash arm for spraying onto kitchenware being washed in the dishwasher;
 - filtering soil from the washing fluid;
 - sensing at least three distinct dynamic operating parameters of the dishwasher; and
 - both initiating and terminating an unscheduled drain operation for the dishwasher based on at least two of the three distinct dynamic operating parameters.
24. The method of claim 23, wherein the at least three dynamic operating parameters include washing fluid flow, washing fluid soil level and pump motor current.